

# Across The Pond

A Quarterly Update on Joint UK NDA/US DOE Activities and Initiatives

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U.S. DEPARTMENT OF ENERGY  
**ENERGY**



Nuclear  
Decommissioning  
Authority



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## 8th Standing Committee Meeting A Great Success!

Members of DOE's Office of Environmental Management (EM) and the UK's Nuclear Decommissioning Authority (NDA) held their 8th Standing Committee Meeting on March 2, 2011, at the annual Waste Management 2011 Conference in Phoenix, AZ. The meeting focused on the progress achieved since the last time the committee met in the UK in October 2010 as well as new areas for collaboration such as Project Management and Supply Chain Management. The general consensus was that the collaboration efforts are progressing steadily and that both organizations are recognizing the value of the Agreement.

Participating members from EM included Yvette Collazo, Steve Schneider, Kurt Gerdes, Gary DeLeon, Andy Szilagyi, Mike Howard (Director of the Office of Procurement Planning), Lowell Ely (Director of the Office of Project Management Oversight) and Ana Han. John Vienna and Jim Bresee represented the Office of Nuclear Energy at the meeting. NDA was represented by John Mathieson, Graham Jonsson, John Dalton and Ron Gorham.

The Bilateral Agreement has enabled numerous advances in many topic areas, such as Fuel Drying and Dry Storage, Plutonium Management, Aging Facilities

Management, Non-standard fuels management, Glass Chemistry, Hot Isostatic Pressing and Sodium Passivation. Success of the agreement is illustrated by the participation of more than 120 individuals across NDA, DOE, the national labs and contractors in both the US and the UK who have been involved in one or more conference calls, a Technical Exchange Meeting or visits from the NDA to DOE and vice versa. Moving forward, further progress will be made on each of these topic areas and it is hoped to be able to report additional areas of collaboration at the next Committee Meeting which is likely to be held in the UK, September / October 2011.

## **Waste Management 2011 Highlights US DOE-UK NDA links**

The annual international Waste Management conference, held in Phoenix at the beginning of March, is the largest in the world dealing with radwaste management, clean-up, decommissioning and disposal. This year it attracted a record number of attendees, with over 2200 people coming from 35 countries. It also hosts the largest exhibition with some 170 companies exhibiting. For the NDA it provides the opportunity to meet with a number of its international counterparts, particularly the US Department of Energy (DOE).

The US waste management, decommissioning and clean-up market dominates proceedings, and this year Savannah River and West Valley were “featured sites”. But there is also a non-US flavour and Sellafield was chosen this year to be the first non-US featured site. This meant there were special sessions and highlighted papers and presentations, plus special coverage in the conference daily newsletters. This enabled the NDA and Sellafield colleagues to highlight the technical and cultural challenges and achievements at the site over the last few years, including exchanges taking place under the Bilateral Agreement between the two organizations (See separate article). The opening plenary session featured Dr Inés Triay giving an update on where DOE was in cleaning up its sites. The vision is that by 2020 Hanford will be the only site left with a significant clean up task. She referred to DOE’s approach to contractor partnering and the fact that DOE is ready to sign a partnering charter at Savannah River in an effort to get more value

for the dollars spent. The DOE mission is of interest to NDA on several fronts: the UK contracting model is based on that used in the US, the same supply chain companies are involved in the US and the UK, and the existence of the Bilateral Agreement enables exchange of ideas and information to enable each organization to benefit from respective experiences.

The US-UK theme was embellished further in the plenary session by Tom Zarges, the President of Energy and Construction for URS Corporation. As well as being a major prime contractor in the DOE market, URS is a partner organization of both Nuclear Management Partners (NMP) which currently manages the Sellafield site and UK Nuclear Waste Management Ltd which operates the UK Low level waste repository near Drigg. Zarges compared the approach to contractor-client partnering in both the US with DOE, and in the UK with NDA.

Ian Hudson, NDA’s Head of Programme Sellafield and Sellafield Directors Todd Wright, Mike Johnson and Russ Mellor were joined by Graham Fairhall of NNL and Dave Moody from Savannah River in a panel session discussing the Sellafield site. Ian described NDA’s expectations from the Sellafield competition and the award of the contract to NMP. Todd and colleagues then explained how they have gone about delivering against the NDA requirements, the situation they found, the changes they are making and the challenges going forward including technical, organizational and cultural. Graham Fairhall covered NNL’s support of Sellafield operations which complemented Dave Moody reporting on the technical exchanges that have taken place

between Sellafield staff and Savannah River – another good example of US/UK collaboration. A second panel discussed the benefits of the bilateral relationship between DOE and NDA. Ron Gorham (NDA Head of Supply Chain Management), Graham Jonsson (NDA National Programmes, Wastes) and John Mathieson (NDA, Head of International Affairs) were joined by their DOE counterparts Yvette Collazo (Director, Office of Technology Innovation & Development), Steve Schneider (Director, Office of Waste Processing) and Mike Howard (Director, Office of Procurement Planning). Yvette stressed the drivers for collaboration being about aiming to achieve cost savings through sharing experiences. John referred to the importance of the DOE agreement in the overall context of the NDA’s international relations strategy and the number of other bilateral agreements it has. Ron and Mike Howard considered the benefits of securing multi year funding and how contractor performance could be jointly benchmarked.

Graham and Steve went into more technical areas and described the work to underpin strategic risks in areas such as spent fuel management and thermal treatment technologies. In a separate session NDA’s John Dalton gave an update on managing radioactive waste in the UK including the launch of the generic disposal system safety case.

The inclusion of these two sessions in such a major event and the dialogue shared by the Senior representatives from both DOE and NDA and their respective contractors demonstrates the importance of the Bilateral Agreement to both organizations.

## **US Congress Seeks Lessons Learned from UK Reprocessing**

The US Government Accountability Office has been requested by the House of Representatives’ Committee on Energy and Commerce to report on actions the Department of Energy (DOE) is taking and the challenges it faces in selecting preferred nuclear fuel cycles for the U.S. and in better understanding and minimizing nuclear proliferation and terrorism risks that are associated with introducing such a cycle. In addition, the Committee also requested that GAO examine the operating experiences and outcomes of recycling used nuclear fuel in France and the UK.

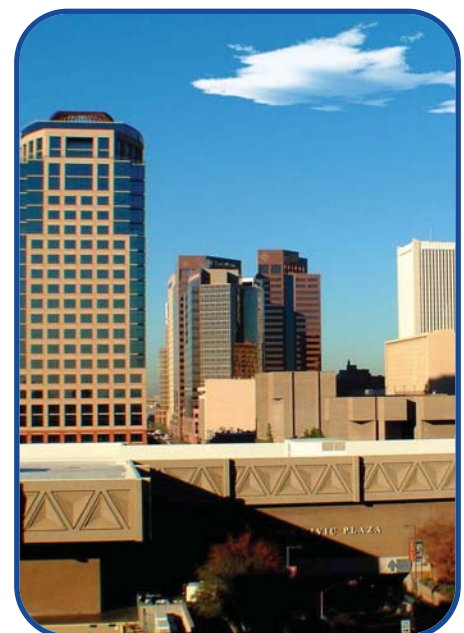
As part of the study GAO analyst Raj Verma and Senior Policy Analyst Tom Laetz, braved

the December winter weather to come to the UK to look at the NDA’s reprocessing operations. They met with senior NDA, Sellafield Ltd and UK Government officials as part of their task to identify lessons learned from the reprocessing experiences of the UK.

Unfortunately the weather in the UK did not allow Tom to take part in a tour of the Sellafield reprocessing plant, but Raj had an in-depth visit of the THORP reprocessing plant, the vitrification plant, and the HLW store.

As well as the NDA and DECC, the GAO also met with the Royal Society. They are undertaking a study of “responsible stewardship of a nuclear renaissance: best practice for non-proliferation” which also covers a number of issues of common interest to the GAO.

The GAO report is expected to be available in the Summer.





## Third International Technical Exchange on Long-term Glass Corrosion held January 25-28th, 2011

The international recognition of the critical importance of studies into glass corrosion mechanisms was again on display with the third international technical exchange on long-term glass corrosion issues hosted by the UK National Nuclear Laboratory in Manchester. The 26 attendees included a mix of industrial scientists, geochemists, computational modelers, program administrators, and glass scientists representing 2 French labs (CEA, Subatech), 5 UK organizations (NNL, NDA, ISL, Sellafield Ltd, and SERCO), JAEA (Japan), SCK-CEN (Belgium), 6 American national labs (PNNL, LBNL, ORNL, ANL, SRNL, and SNL), and 3 universities (Kyushu, Penn State, and Tokai). See the attached picture for attendees.

One of the main goals of the technical exchange was to present recent results and discuss conclusions that may arise from those studies. This review and discussion took nearly two full days; after this session, small breakout groups were formed to brainstorm critical areas of research possessing either scientific uncertainty or some degree of non-consensus among the group. The full group convened to consolidate this list and have discussions on the proposed research topics. In order to prioritize this list, new breakout groups were tasked with outlining a way to attack the topics on the list. Through further discussion, the group determined the most critical research areas prioritized with the group's consensus of a high probability of experimental success; this list will be used as a priority for directing research. The

report for this meeting is currently under preparation and will be used to update the technical program plan.

In addition to the technical exchange meeting, the UK hosts also organized a tour of their research and immobilization facilities at Sellafield in Cumbria, England. We would like to voice our appreciation of the UK laboratories that hosted and coordinated this workshop, with particular thanks to Mike Harrison of the NNL. These technical

exchanges to develop the data and understanding necessary for an international consensus on the behavior of glass waste form corrosion over geologic time scales in a variety of disposal environments is critical to the establishment of consensus among the participant countries and to a completeness of research that is necessary to establish broad public trust to site geologic repositories for nuclear waste.



Attendees from left to right: top row – Peter Zapol (ANL), Jim Neeway (Subatech), Mark Cowper (UK-NDA), John Vienna (PNNL), Pierre Frugier (CEA), Eric Pierce (ORNL), Nathan Cassingham (ISL), Abdesselam Abdelouas (Subatech), Carl Steele (Sellafield Ltd.), Louise Criscenti (SNL), Rick Short (NNL), Karel Lemmens (SCK-CEN), Nick Gribble (NNL), Amanda Billings (SRNL), Stéphane Gin (CEA), Peter Wood (UK-NDA), Carl Steefel (LBNL), Carlo Pantano (Penn State Univ.), Russell Hand (ISL), James Schofield (Serco-Harwell) kneeling – Yaohiro Inagaki (Kyushu Univ, JAEA), Joe Ryan (PNNL), Denis Strachan (PNNL), Mike Harrison (NNL), Toshiaki Ohe (Tokai Univ.) Not pictured – Bill Ebert (ANL), who attended by phone/web conference

### Web-based Information Exchange Portal being Developed

A brand new resource is currently being created that aims to centralize the knowledge generated and exchanged under the Bilateral Agreement. This Information Exchange Portal will be web-based and will be available to all interested parties in DOE, NDA and their associated organizations (contractors, regulators etc) through a simple registration process. The final structure of the portal is still being developed but it will contain as a minimum minutes from all of the conference calls and information exchange meetings, information on upcoming events and

conferences, message boards, contact information of all members and 'find an expert' resources to enable rapid identification of a person within our community who may be able to help with a specific question or issue.

It is anticipated that the portal will 'go live' in the autumn and a formal launch is being planned to coincide with the ICEM 2011 conference in Reims, France in late September. This will be another positive step towards meeting the NDA and DOE common goals of sharing information, lessons learned and operational experiences to improve the safety, accelerate the schedule and reduce the cost of cleanup efforts on both sides of the Atlantic.



## NDA Builds Links to Savannah River!



Adrian Simper (NDA Strategy Director), Clive Nixon (NDA Strategy Manager) and Michael Glass (NDA Head of Revenue and Services) jetted off to the United States to visit the Department of Energy's Savannah River Site in South Carolina. The main aim of the trip was to see how the US is proposing to manage its surplus Plutonium from its weapons programme, and to see the approach they used to procure their MOX facility.

The UK government's current consultation on plutonium includes the reuse of MOX fuel as an option for managing the UK's plutonium stockpile. It is also an option in the NDA's Plutonium Credible Options strategy paper. If this were to become the preferred option the general view is that we would need a new MOX plant to deliver this.

The MOX Fuel Fabrication Facility (MFFF) at the Savannah River Site is a new facility for the production of MOX fuel. It's around 50% complete with the construction phase largely finished. The team visited both the MFFF, and met with national nuclear security staff and the prime contractors for the facility.

They then headed north to Washington DC to the Department of Energy's headquarters, where they met with the National Nuclear Security Administration Fissile materials programme lead, Ken Bromberg, and his team to gain an insight into their experiences and lessons learned from the past 15 years. During their busy schedule they managed to fit in a quick trip to Savannah River Site Ecology Centre, which oversees the impact of the site's activities on the local ecological environment.

Adrian, Clive and Michael were brave enough to handle some of the creatures that call the centre home! The trip helped to establish some good relationships and provide detailed knowledge of best practice and lessons learned, although the information sharing will continue.

A couple of weeks following Adrian's visit, Ian Hudson (NDA Head of Sellafeld Site) and Graham Jonsson (NDA National Programmes, Wastes) took a detour to visit Savannah River while on route to attend the Waste Management Conference in Phoenix, AZ. The visit, hosted by former Sellafeld Managing Director Bill Poulson, included discussions and tours of important facilities such as the tank farm, vitrification plant and the new MOX plant. The

NDA representatives also met with Jim French who, until recently, was the Head of Savannah River Remediation (the Contractor charged with cleaning up the site and managing the tank farms) but who is now headed to the UK to take up the position of Executive Director of the Legacy Ponds and Silos project at Sellafeld. The meeting enabled a good discussion on the similarities and differences between the sites and some of the challenges faced at Sellafeld.

Graham Jonsson said "This visit has given us a valuable insight into the practices adopted, and progress that has been made, at Savannah River and how some of the lessons learned here could be applied to the cleanup at Sellafeld through the consistency of approach brought by URS management."

NDA also took the opportunity to meet with local government and educational representatives from Aiken Technical College and the University of South Carolina to understand how they integrate with the nuclear community from a socio-economic perspective which was useful to compare with the approach being taken by Nuclear Management Partners in the West Cumbria area.



Fred Cavanaugh (Aiken City Mayor), Ian Hudson, Dave Pethick (GM for Global Development and Operations at URS), Richard Pierce (Aiken City Manager), Graham Jonsson

## Developing the Next Generation of Leaders in the Industry

Initial discussions have recently been held between representatives of the DOE and the NDA to expand efforts to increase the involvement of graduates, undergraduates and senior school students in both the nuclear cleanup and power generation markets.

The UK's current nuclear graduates programme ([www.nucleargraduates.com](http://www.nucleargraduates.com)) provides recent graduates with the opportunity to spend three 8-month secondments in sponsoring organizations

to gain experience in a number of different aspects of the nuclear industry including government, the supply chain and with International organizations. In the US, the DOE Fellows Program at Florida International University in Miami, FL, ([www.arc.fiu.edu/intern/](http://www.arc.fiu.edu/intern/)) focuses on providing work experience to current students in DOE, National Labs and major contractors and is designed to create a pipeline of engineers and scientists trained and mentored to enter the workforce in DOE technical areas of need. A teleconference was held recently to discuss how collaboration between these two

complementary programs could provide talented students with greater opportunity from an earlier stage in their studies. It was agreed that the FIU program could act as a 'feeder' program for the nuclear graduates program and that the programs were excellent models for similar programs in the respective countries.

Further discussions are planned in the coming months to develop and implement these ideas further so as to provide both US and UK Government and industry with experienced and qualified individuals to help supplement the existing workforce.

For further information please contact

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